REMARKS

The July 31, 2006 Office Action was based on pending Claims 1-29. This amendment amends Claims 1, 5, 6, 7, 12, 19, 21, and 23. Thus, after entry of this amendment, Claims 1-29 are pending and presented for further consideration.

The July 31, 2006 Office action rejected Claims 1-29. In particular, the Office action rejects Claims 9, 13, 15, 16, 20, and 22-29 under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 4,748,669 to Klayman ("the Klayman patent").

Further, the Office Action rejects Claims 1-8, 8, 10-12, 14, 17-19, and 21 under 35 U.S.C. 103(a) as being unpatentable over Klayman.

Further, the Office Action rejects Claims 1-8 under 35 U.S.C. 112, second paragraph as being indefinite for failing to point out and distinctly claim the subject matter which the applicant regards as the invention. In addition, the Office action rejects Claims 22-29 under 35 U.S.C. 101 as being directed to non-statutory subject matter.

Reconsideration of the pending claims as amended is therefore respectfully requested.

REJECTION OF CLAIMS 1-8 UNDER 35 U.S.C. § 112, SECOND PARAGRAPH

The Office Action rejects Claims 1-8 under 35 U.S.C. 112, second paragraph as being indefinite for failing to point out and distinctly claim the subject matter which the applicant regards as the invention.

Claim 1

The Examiner alleges that the phrase "mid-range attenuation of the difference information" in Claim 1 is confusing.

In response, Applicant has amended Claim 1 to clarify the attenuation of the difference information in a mid-range of frequencies. The element of Claim 1 that describes the attenuation of the difference information at a mid-range of frequencies is describing Figure 2 between the points on the perspective curve labeled "A" and "C". Claim 1 recites:

> "attenuation of the difference information relative to the maximum gain at a mid-range of frequencies, the attenuation occurring above the maximum

gain frequency and increasing with a corresponding increase in difference-information frequency up to the minimum-gain frequency, the attenuation decreasing above the minimum-gain frequency with an increase in difference-information frequency up to the mid-gain frequency;"

The attenuation occurs above the maximum gain frequency (point A on the perspective curve) and the attenuation increases (the gain decreases) as the frequency increases (as indicated along the x-axis) up to the minimum-gain frequency (point B on the perspective curve). The attenuation decreases (the gain increases) above the minimum-gain frequency (point B on the perspective curve) as the frequency increases (as indicated along the x-axis) up to the mid-gain frequency (point C on the perspective curve).

Claim 5

The Examiner alleges that the phrases "a first bass filter" and "a second bass filter" in Claim 5 are improper. In response, Applicant has amended Claim 5 to recite "high-pass filter" instead of "bass filter".

Claims 6 and 7

Applicant has amended Claims 6 and 7 to recite "high-pass filter" instead of "bass filter".

Claims 2-4 and 6-8

Claims 2-4 and 6-8, which depend from Claim 1, are believed to be patentable for the same reasons articulated above with respect to Claim 1, and because of the additional features recited therein.

Applicant respectfully requests the Examiner to withdraw the rejection of Claims 1-8 under 35 U.S.C. § 112, second paragraph.

REJECTION OF CLAIMS 23-29 UNDER 35 U.S.C. § 101

The Office action rejects Claims 22-29 under 35 U.S.C. 101 as being directed to non-statutory subject matter.

Claim 23

In particular, the preamble of Claim 23 defines an apparatus and the claim elements specify method steps. In response, Applicant has amended the preamble of Claim 23 to define a method.

Claims 24-29

Claims 24-29, which depend from Claim 23, are believed to be patentable for the same reasons articulated above with respect to Claim 1, and because of the additional features recited therein.

REJECTION OF CLAIMS 9, 13, 15, 16, 20, and 22-29 UNDER 35 U.S.C. § 102(b)

The Examiner rejected Claims 9, 13, 15, 16, 20, and 22-29 under 35 U.S.C. § 102(b) as being anticipated by Klayman.

Claim 9

Klayman does not combine the spectrally shaped difference information with the set of lower frequencies in the first input and the set of lower frequencies in the second input. Referring to Klayman's Figures 2 and 4, the subsonic filter 12, 112 filters the left input to remove a set of low frequencies from the left input. Likewise, the subsonic filter 14, 114, filters the right input to remove a set of low frequencies from the right input. The mixer 25, 121 adds the filtered left and right input signals to the equalized sum and difference signals.

In contrast, in an embodiment, the summing circuit combines the spectrally shaped difference information with the lower frequencies in the first input to generate a first output. In addition, the summing circuit combines the spectrally shaped difference information with the lower frequencies in the second input to generate a second output. Referring to Figure 1, filters 28 and 30 filter the inputs to the difference circuit 34, while the unfiltered left input is an input to the summing circuit 58 and the unfiltered right input is an input to the summing circuit 56. Thus, the left output 60 and the right output 62 comprise the set of lower frequencies that are present in the original left and right input signals.

Because the references cited by the Examiner do not disclose, teach or suggest a summing circuit in communication with the equalizer and the first input and the

second input, the summing circuit configured to combine the spectrally shaped difference information with the set of lower frequencies in the first input to generate a first output, the summing circuit further configured to combine the spectrally shaped difference information with the set of lower frequencies in the second input to generate a second output, along with the other recitations of independent Claim 9, Applicant asserts that Claim 9 is not obvious in view of Klayman. Applicant therefore respectfully submits that Claim 9 is patentably distinguished over the cited references and Applicant respectfully requests allowance of Claim 9.

Claims 13 and 15

Claim 13 and 15, which depend from Claim 9, are believed to be patentable for the same reasons articulated above with respect to Claim 9, and because of the additional features recited therein.

Claim 16

Although Claim 16 has different language than Claim 9, Claim 16 is believed to be patentable for similar reasons (where applicable), and because of the different features recited therein.

Claim 20 and 22

Claims 20 and 22, which depend from Claim 16, are believed to be patentable for the same reasons articulated above with respect to Claim 16, and because of the additional features recited therein.

Claim 23

Although Claim 23 has different language than Claim 9, Claim 23 is believed to be patentable for similar reasons (where applicable), and because of the different features recited therein.

Claims 24-29

Claims 24-29, which depend from Claim 23, are believed to be patentable for the same reasons articulated above with respect to Claim 1, and because of the additional features recited therein.

REJECTION OF CLAIMS 1-8, 8, 10-12, 14, 17-19, and 21 UNDER 35 U.S.C. § 103(a)

The Office Action rejects Claims 1-8, 8, 10-12, 14, 17-19, and 21 under 35 U.S.C. 103(a) as being unpatentable over Klayman.

Claim 1

Klayman does not combine the processed difference information with at least a portion of the set of lower frequencies in the left input and with at least a portion of the set of lower frequencies in the right input. Referring to Klayman's Figures 2 and 4, the subsonic filter 12, 112 filters the left input to remove a set of low frequencies from the left input. Likewise, the subsonic filter 14, 114, filters the right input to remove a set of low frequencies from the right input. The mixer 25, 121 adds the filtered left and right input signals to the equalized sum and difference signals.

In contrast, in an embodiment, the summing circuit combines the processed difference information with at least a portion of the set of lower frequencies in the left input to create an enhanced left output. The summing circuit also combines the processed difference information with at least a portion of the set of lower frequencies in the right input to create an enhanced right output. Referring to Figure 1, filters 28 and 30 filter the inputs to the difference circuit 34, while the unfiltered left input is an input to the summing circuit 58 and the unfiltered right input is an input to the summing circuit 56. Thus, the left output 60 and the right output 62 comprise the set of lower frequencies that are present in the original left and right input signals.

Because the references cited by the Examiner do not disclose, teach or suggest a summing circuit that combines the processed difference information with at least a portion of the set of lower frequencies in the left input to create an enhanced left output, the summing circuit also configured to combine the processed difference information with at least a portion of the set of lower frequencies in the right input to create an enhanced right output., along with the other recitations of independent Claim 1, Applicant asserts that Claim 1 is not obvious in view of Klayman. Applicant therefore respectfully submits that Claim 1 is patentably distinguished over the cited references and Applicant respectfully requests allowance of Claim 1.

Claims 2-8

Claims 2-8, which depend from Claim 1, are believed to be patentable for the same reasons articulated above with respect to Claim 1, and because of the additional features recited therein.

Claims 10-12, 14, 17-19, and 21

Claims 10-12, and 14, which depend from Claim 9, and Claims 17-19, and 21, which depend from Claim 16, are believed to be patentable for the same reasons articulated above with respect to Claims 9 and 16, respectively, and because of the additional features recited therein.

CONCLUSION

Although amendments and cancellations have been made, no acquiescence or estoppel is or should be implied thereby. Rather, the amendments and cancellations are made only to expedite prosecution of the present application, and without prejudice to presentation or assertion, in the future, of claims on the subject matter affected thereby. Furthermore, any arguments in support of patentability and based on a portion of a claim should not be taken as founding patentability solely on the portion in question; rather, it is the combination of features or acts recited in a claim which distinguishes it over the prior art.

In view of the foregoing, the present application is believed to be in condition for allowance, and such allowance is respectfully requested. If further issues remain to be resolved, the Examiner is cordially invited to contact the undersigned such that any remaining issues may be promptly resolved. Also, please charge any additional fees, including any fees for additional extension of time, or credit overpayment to Deposit Account No. 11-1410.

Respectfully submitted,

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